

FIG. 1A

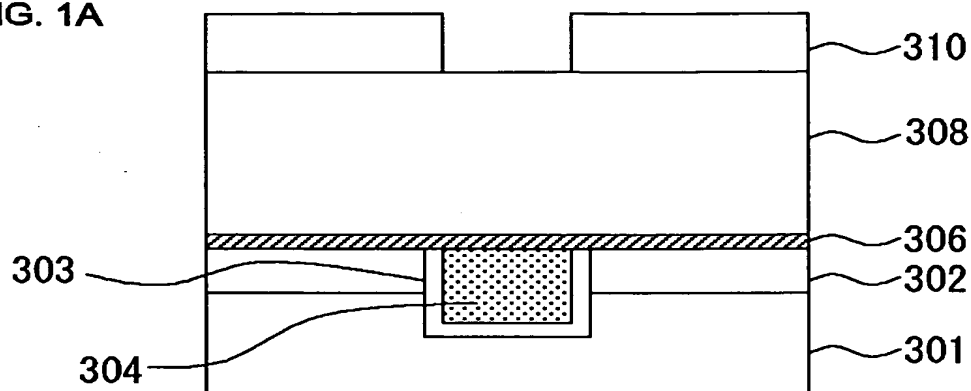


FIG. 1B

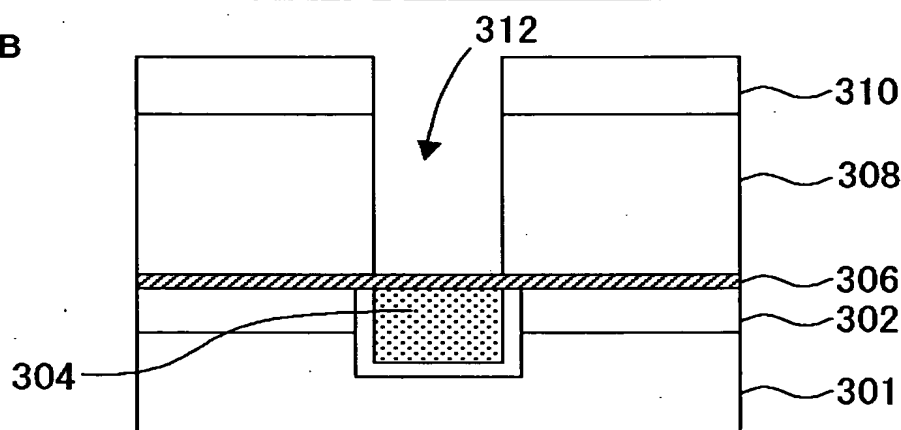


FIG. 1C

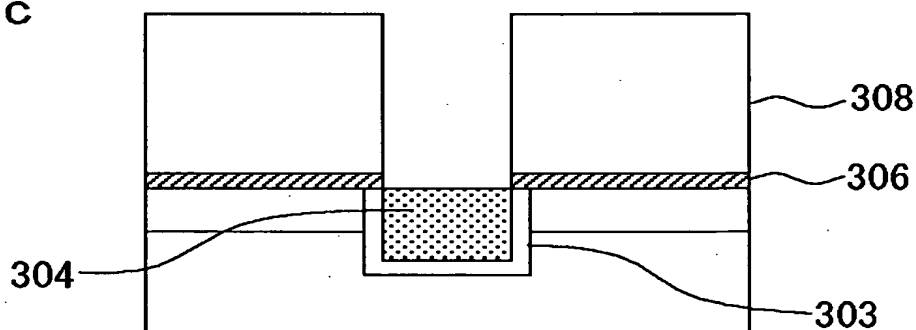


FIG. 1D

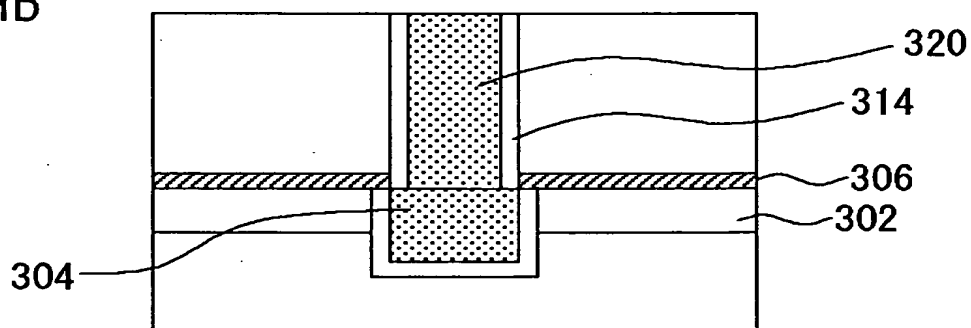


FIG. 2

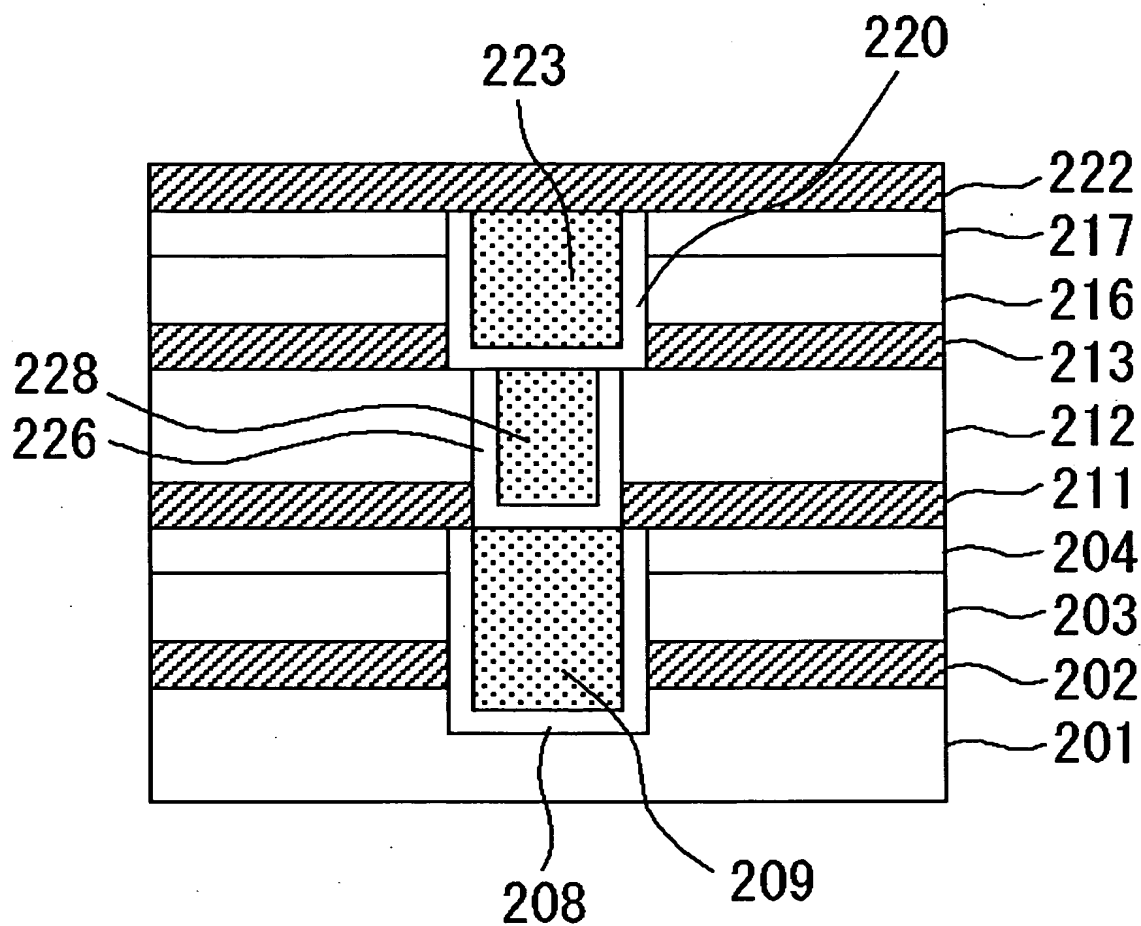


FIG. 3A

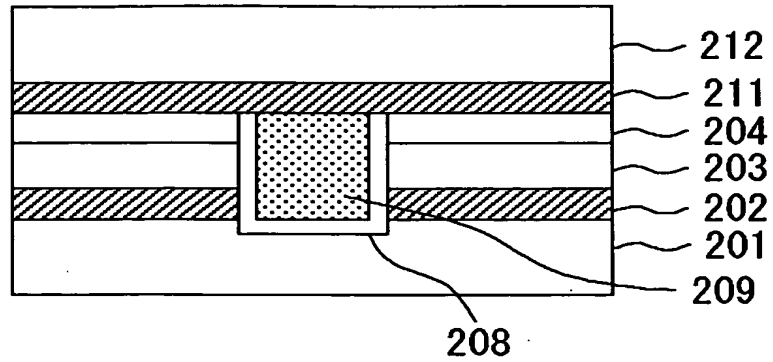


FIG. 3B

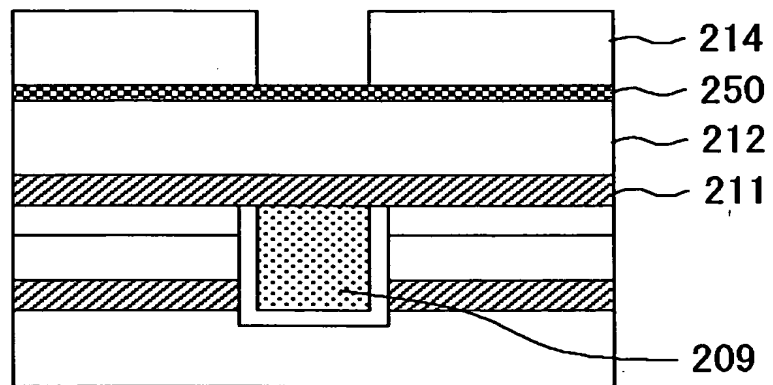


FIG. 3C

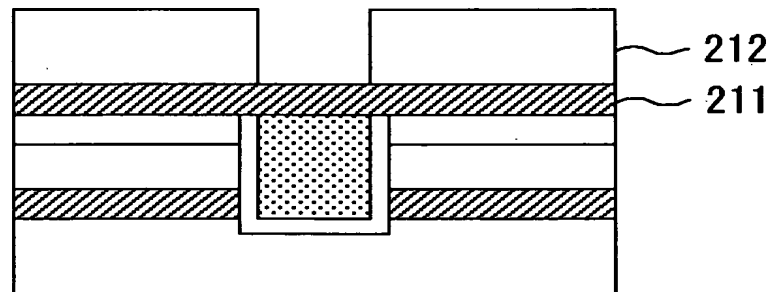


FIG. 3D

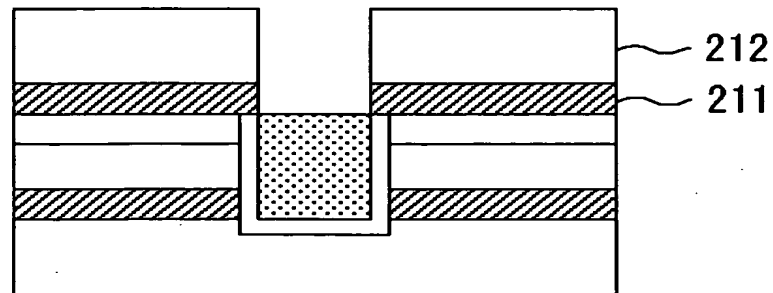


FIG. 4E

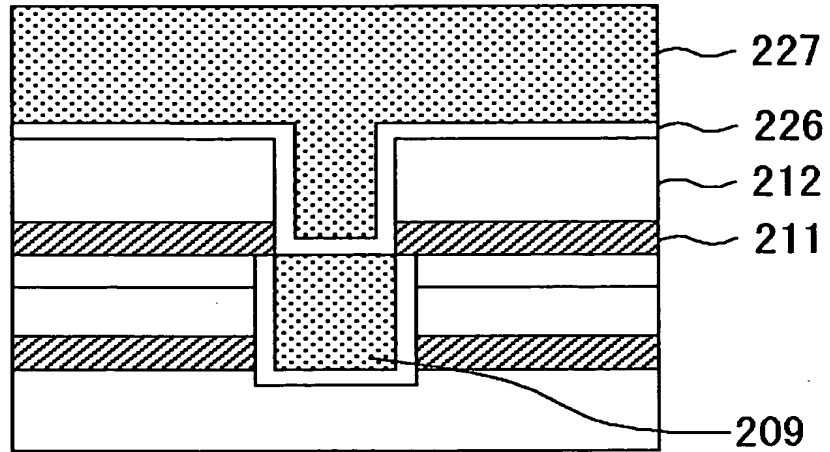


FIG. 4F

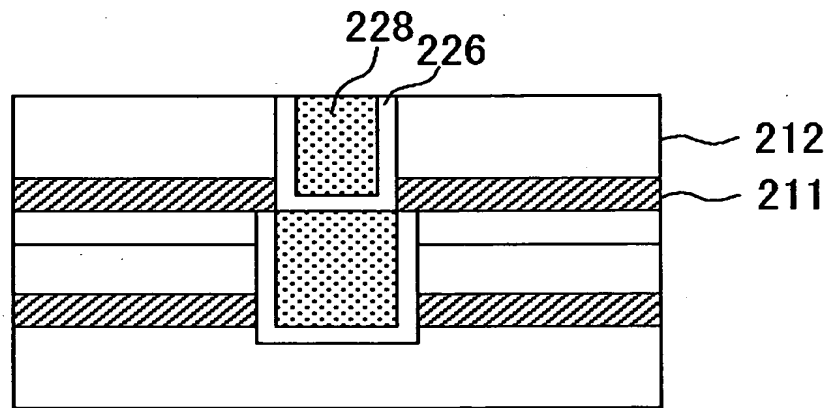


FIG. 4G

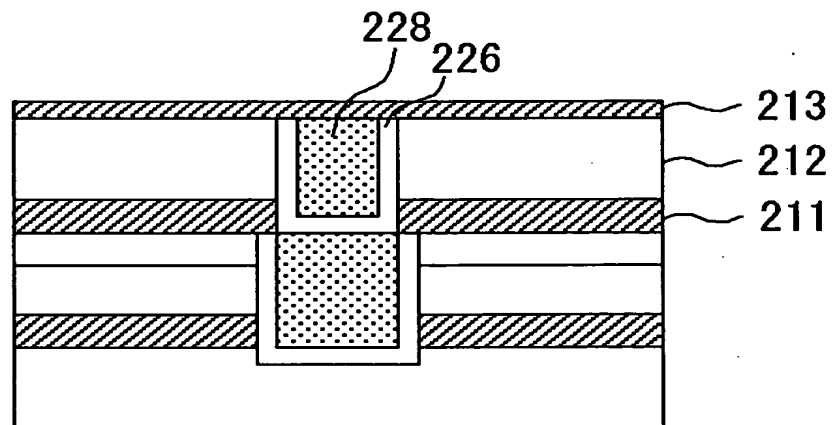


FIG. 5H

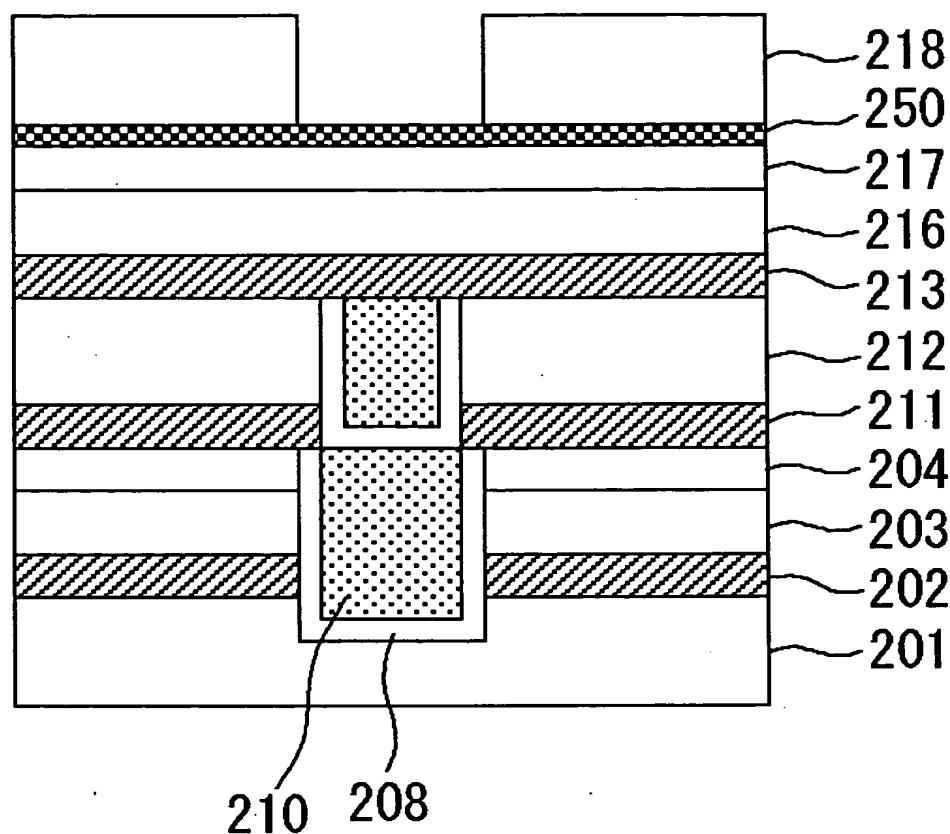


FIG. 5I

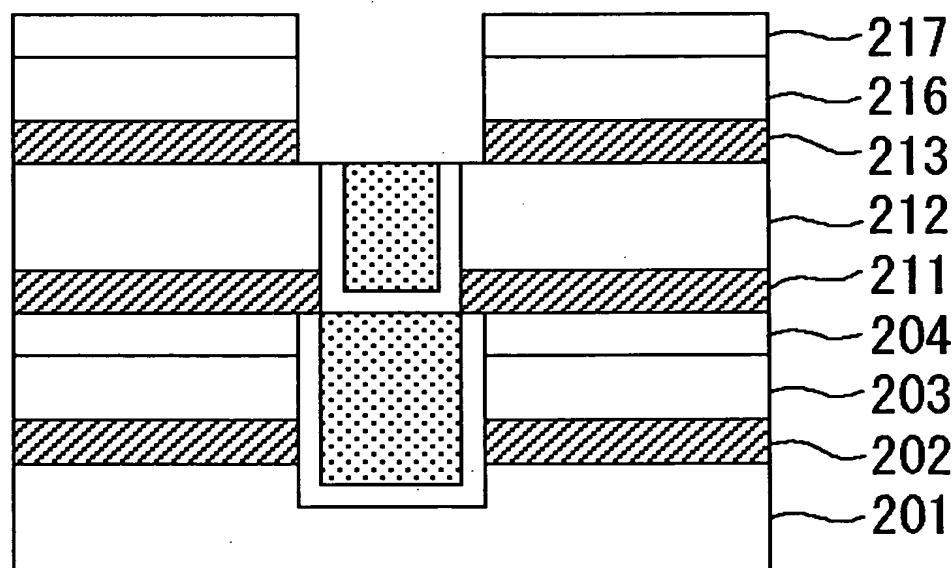


FIG. 6J

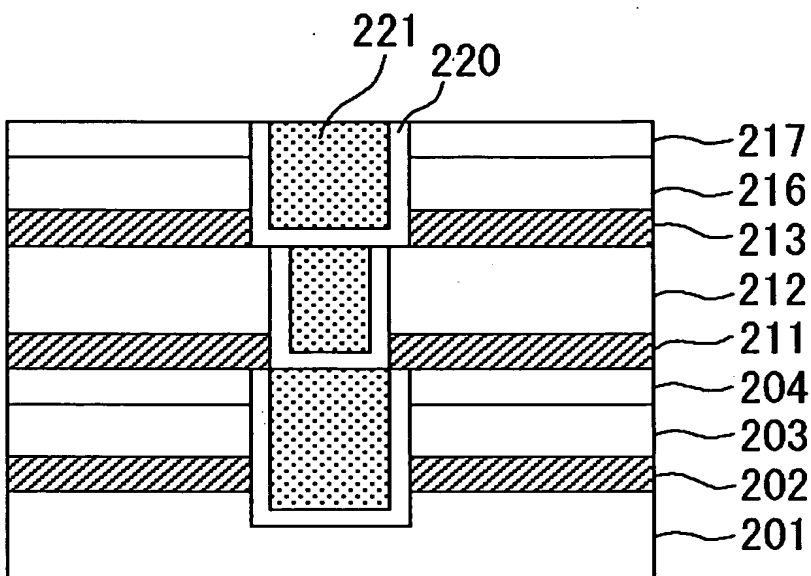


FIG. 6K

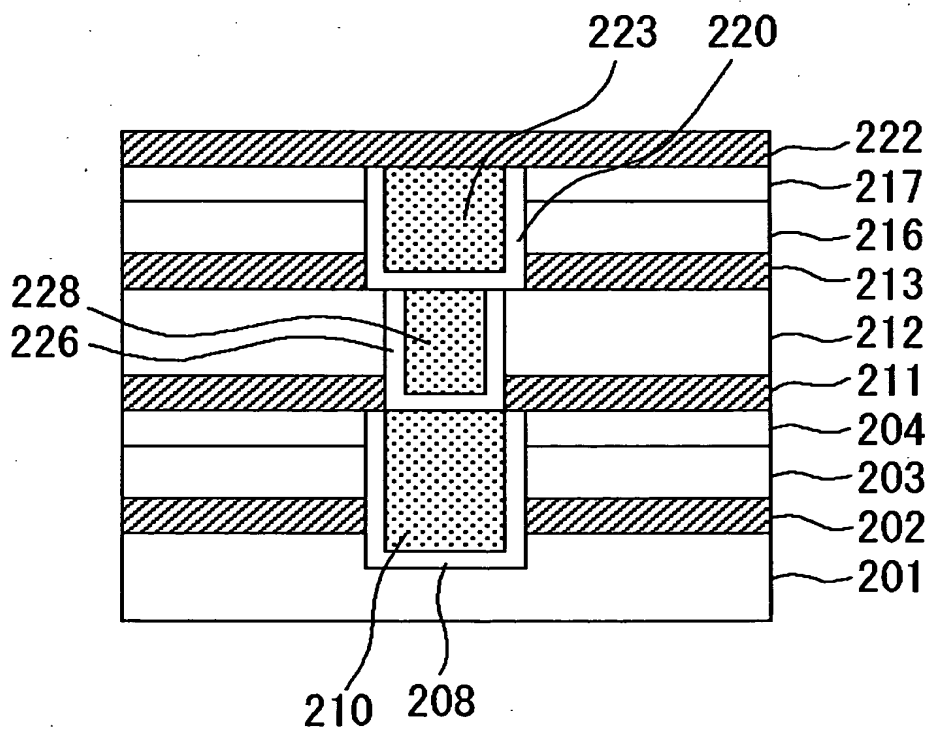
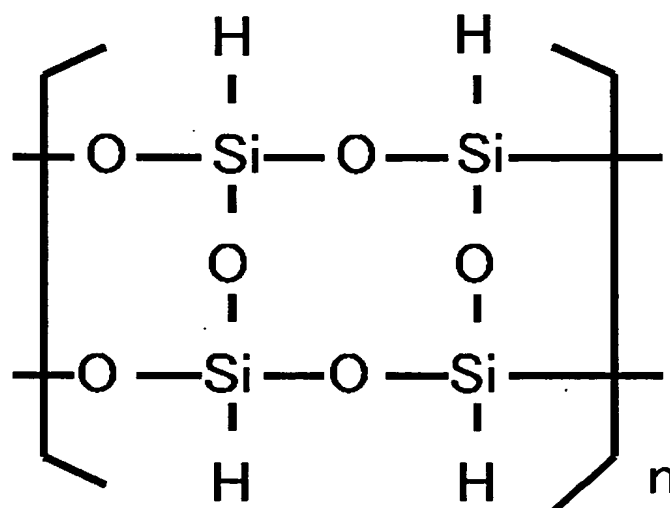


FIG. 7



**FIG. 8**

<b>DIELECTRIC CONSTANT (at 1 MHz)</b>	<b>2.9</b>
<b>REFRACTIVE INDEX (at 633 nm)</b>	<b>1.39</b>
<b>STRESS (dyne/cm<sup>2</sup>)</b>	<b>7.00 X 10<sup>8</sup></b>
<b>HARDNESS (GPa)</b>	<b>0.9</b>
<b>ELASTICITY (GPa)</b>	<b>6</b>
<b>THERMAL EXPANSION COEFFICIENT (ppm/deg-C)</b>	<b>18</b>
<b>GLASS TRANSITION TEMPERATURE (deg-C)</b>	<b>NA</b>
<b>THERMAL CONDUCTIVITY (W/mK, at 25 deg-C)</b>	<b>0.31</b>



FIG. 9

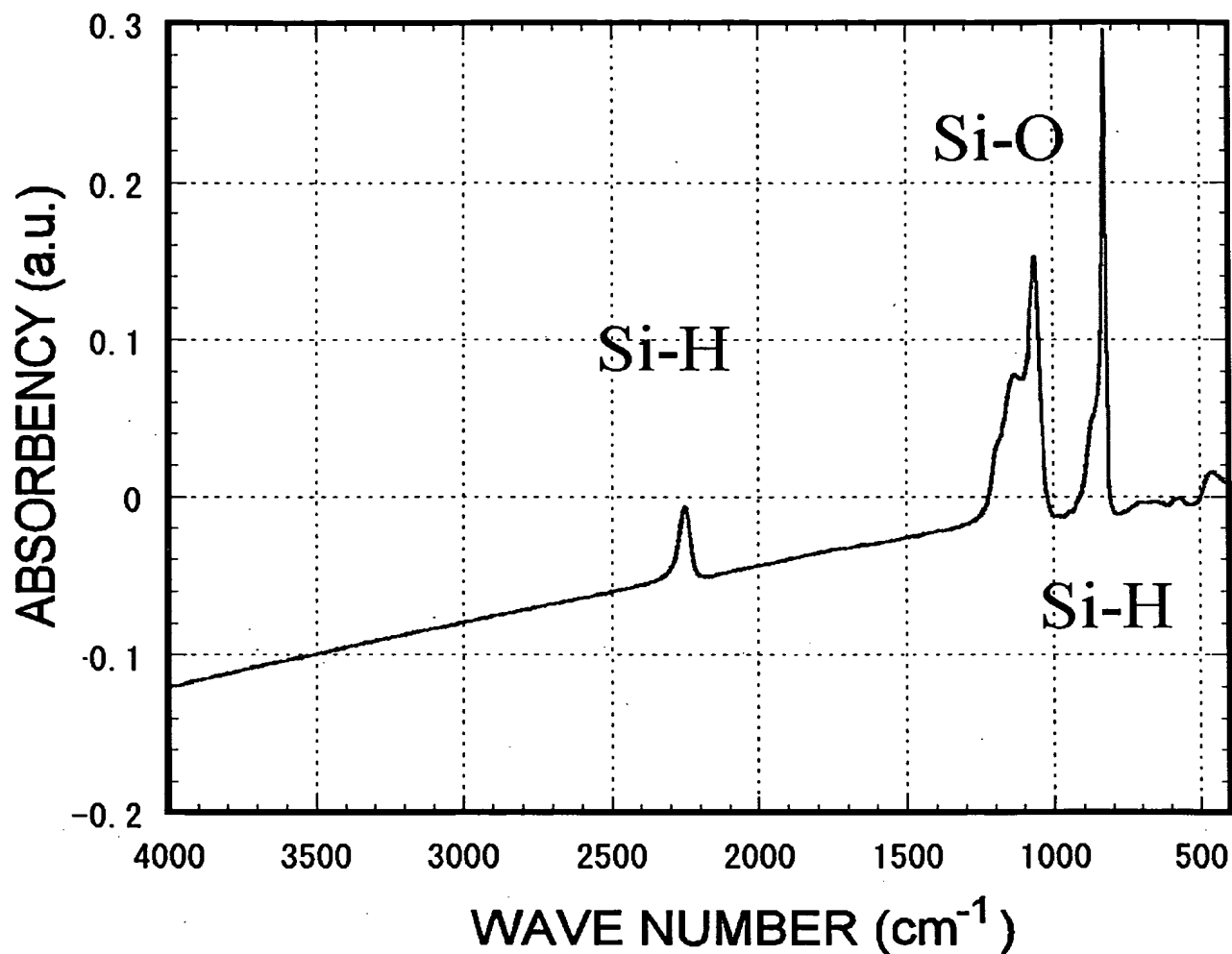


FIG. 10

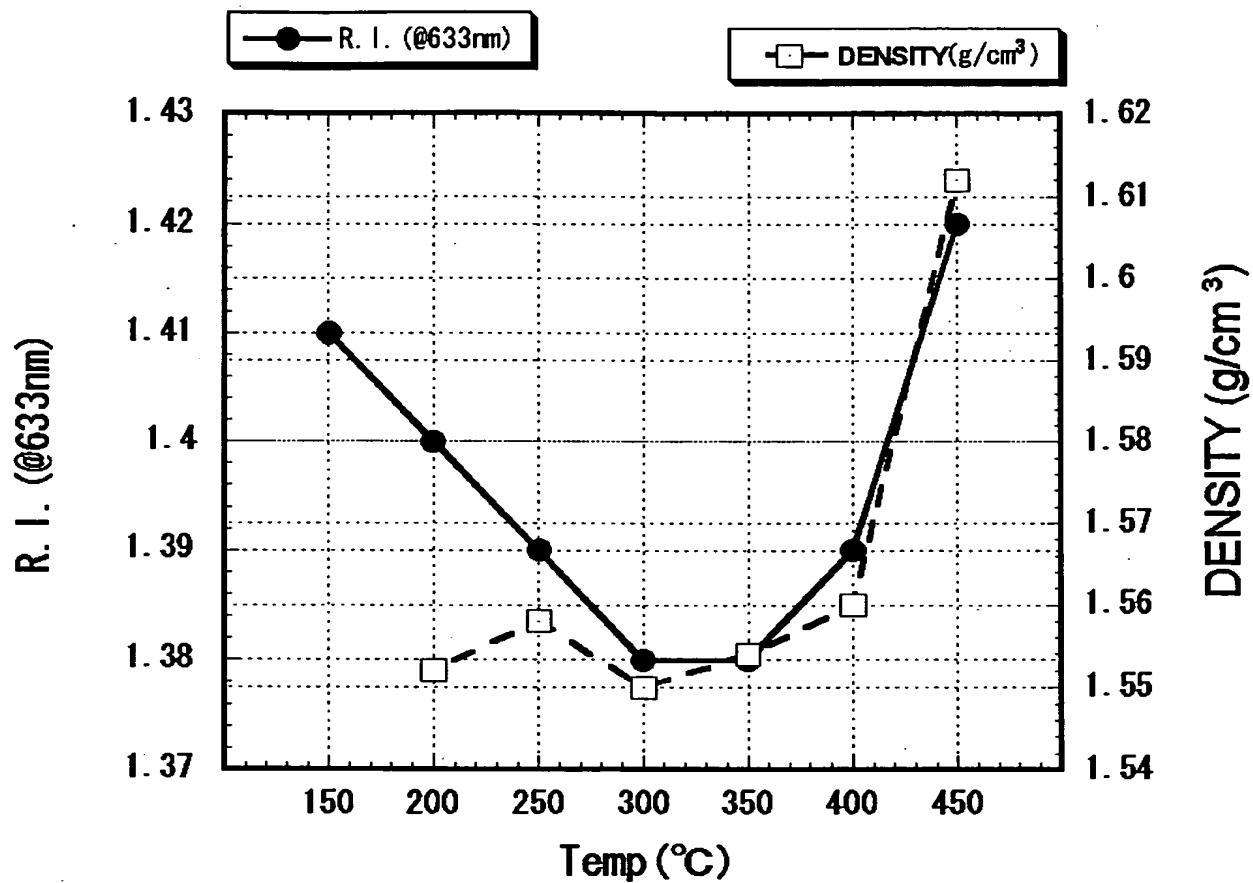


FIG. 11

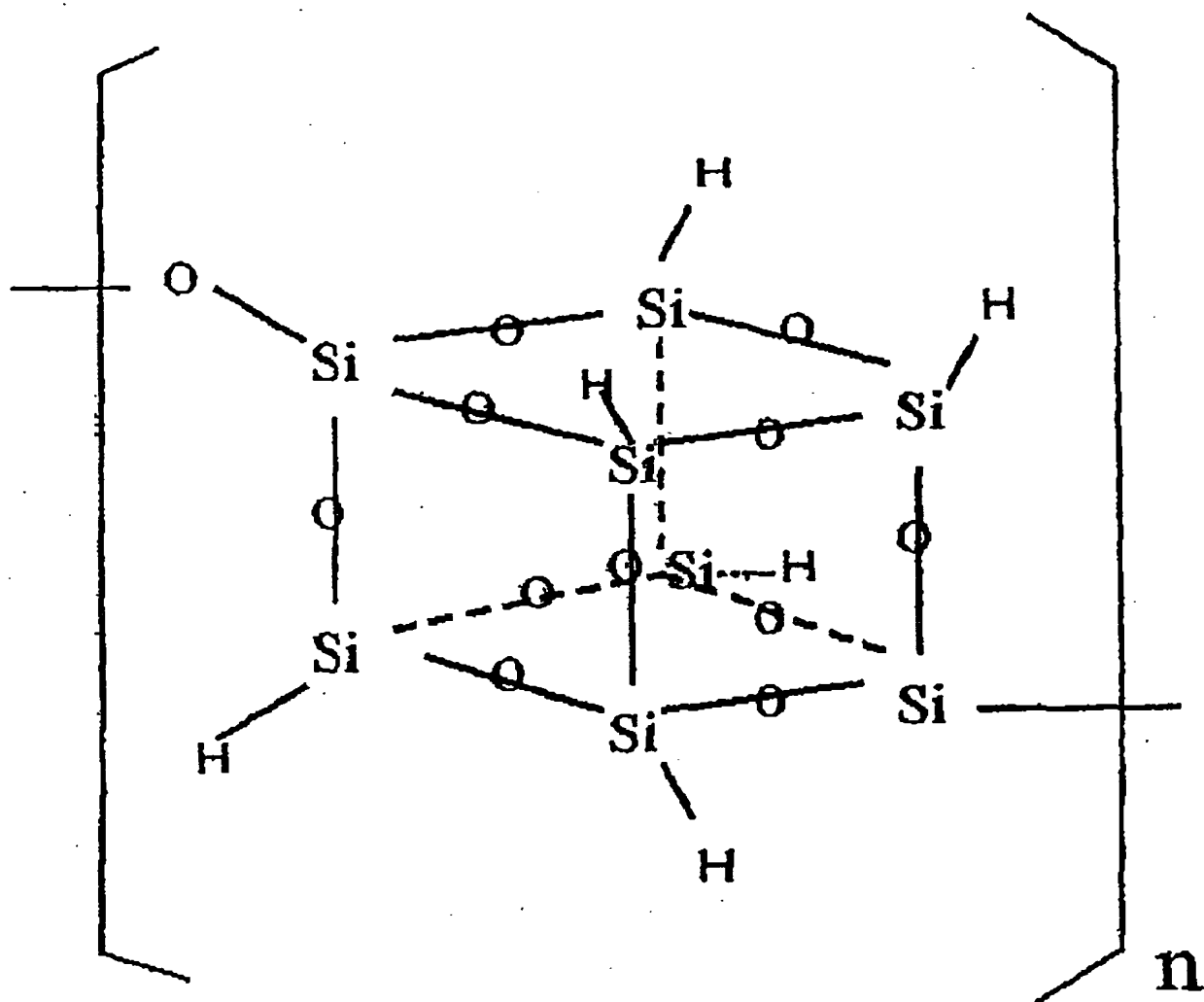


FIG. 12

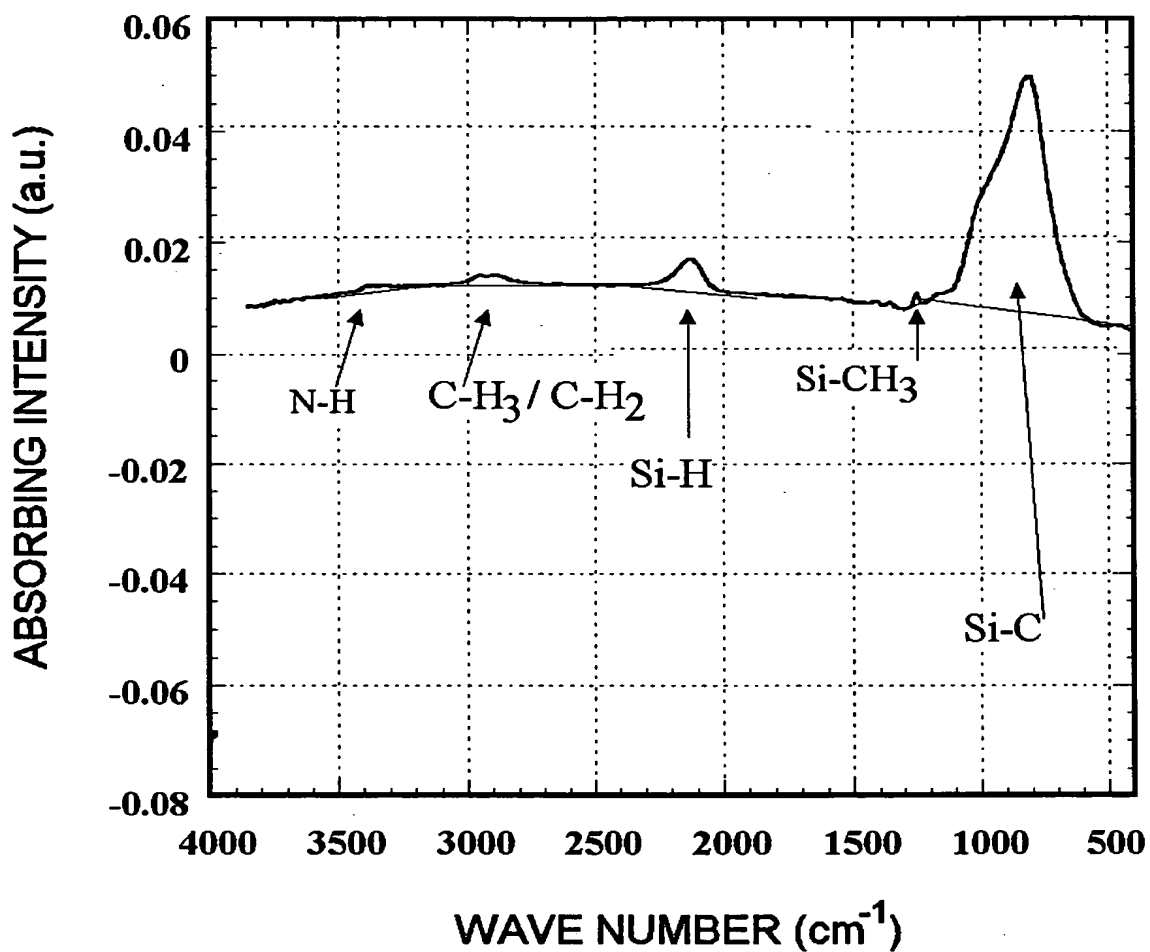


FIG. 13

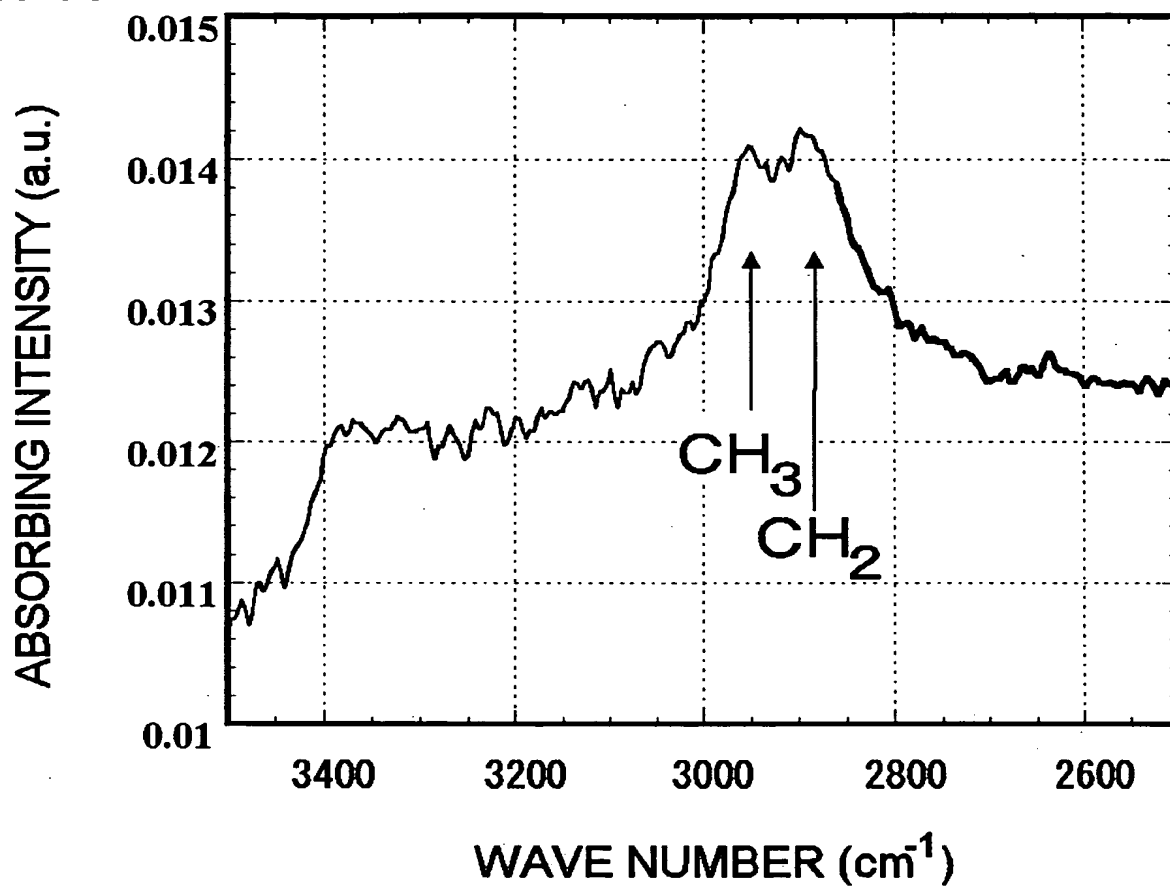


FIG. 14

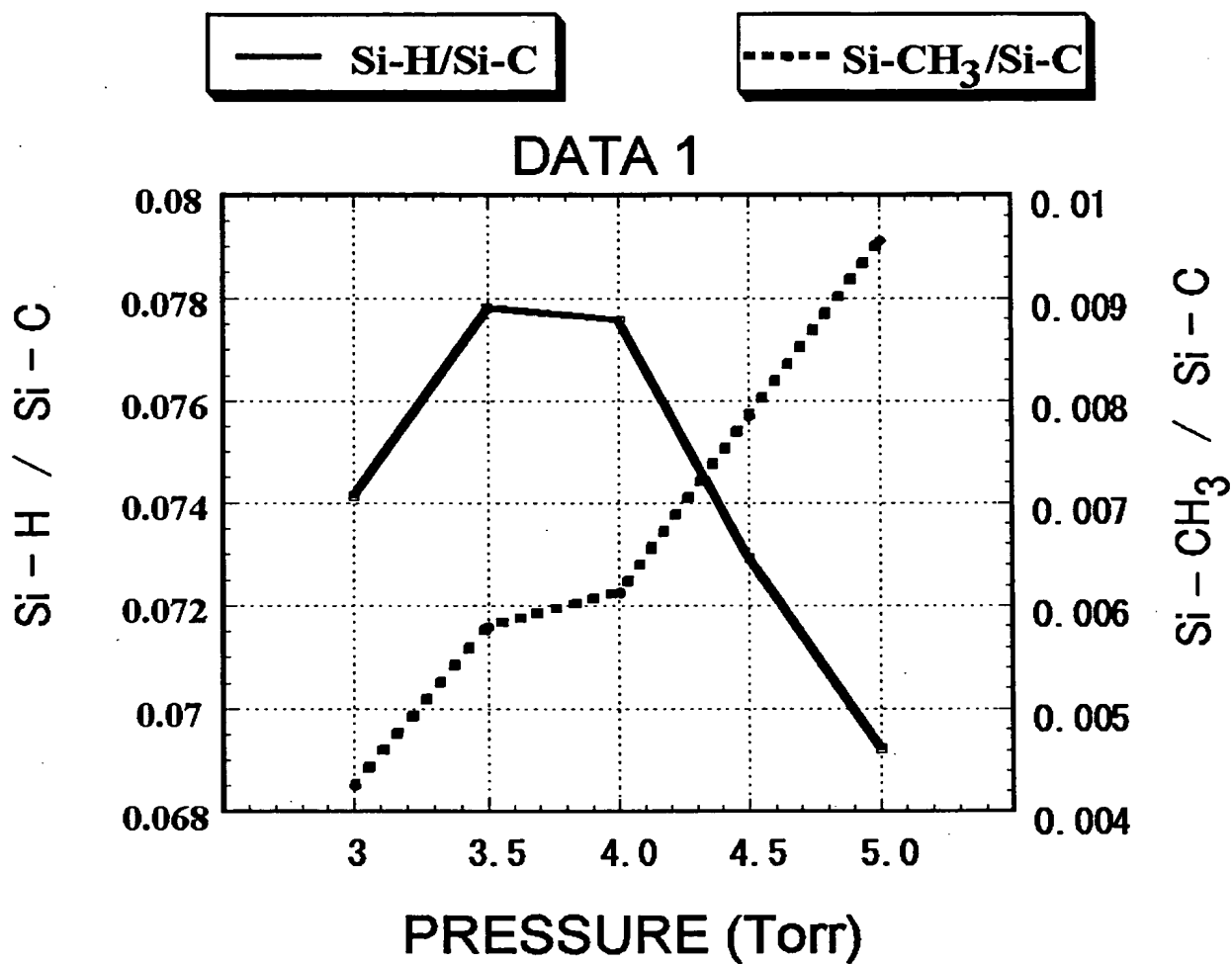


FIG. 15

PRESSURE (Torr)	3.0	3.5	4.0	4.5	5.0
CH <sub>3</sub> : CH <sub>2</sub>	<	<	<	>	>
Adhesion	○	○	○	×	×

FIG. 16

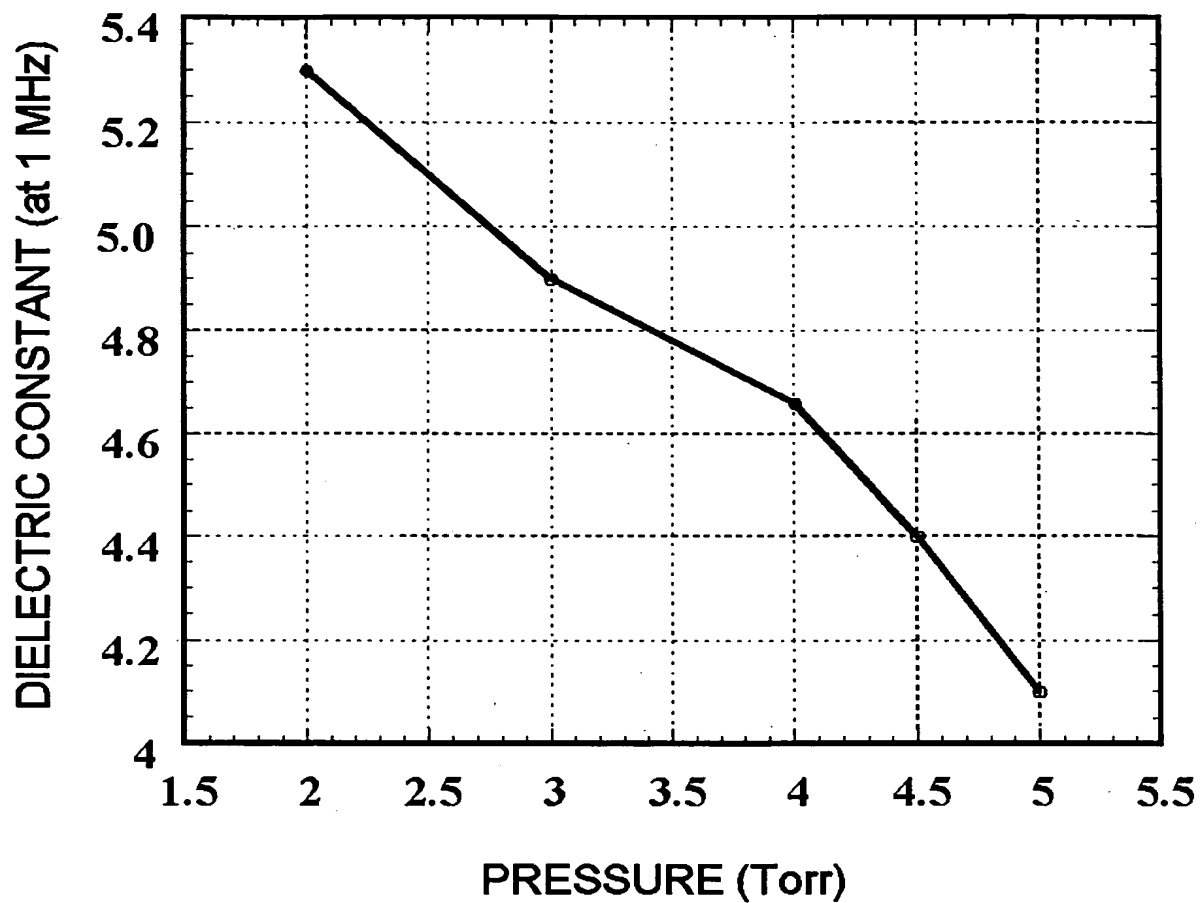




FIG. 17

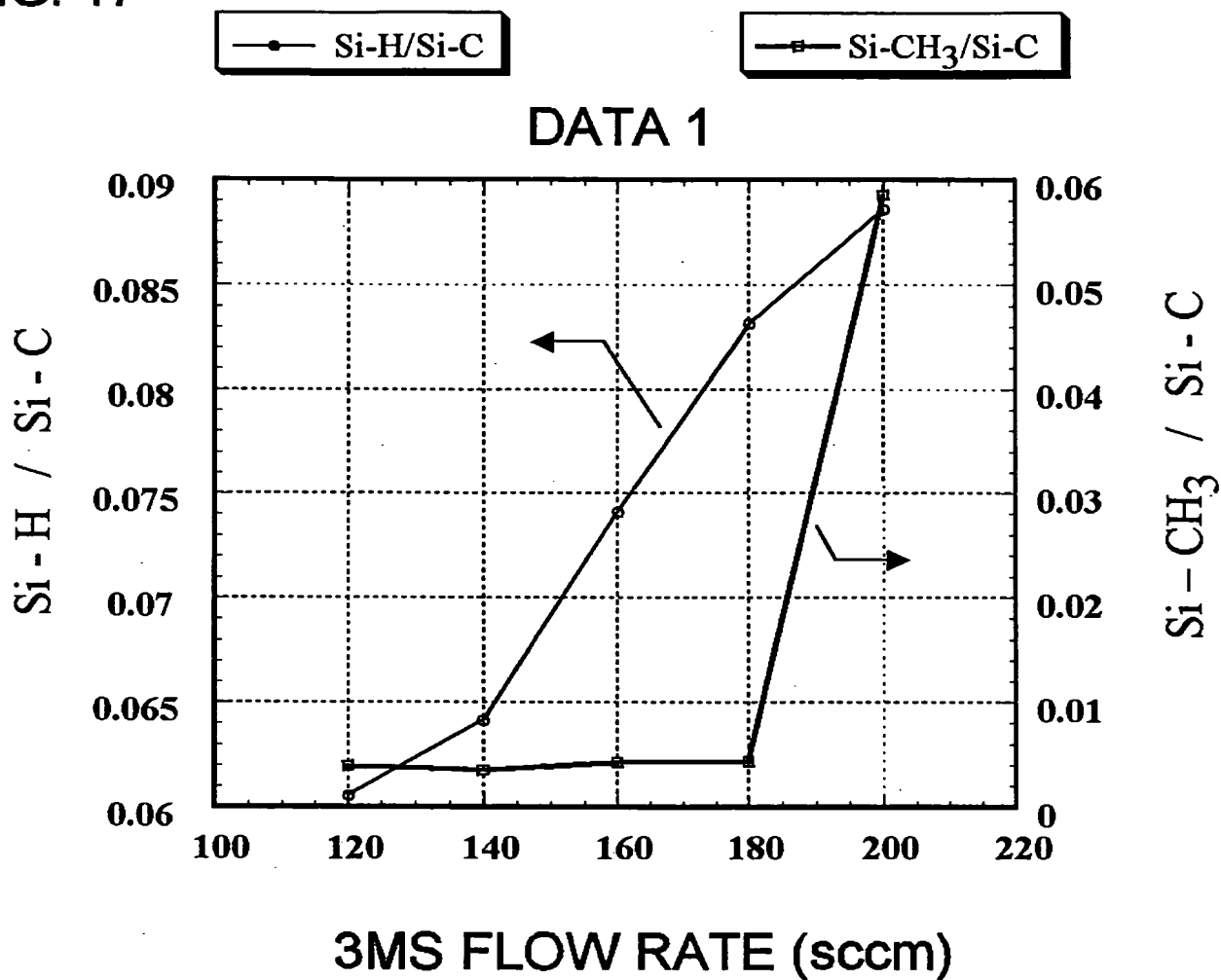
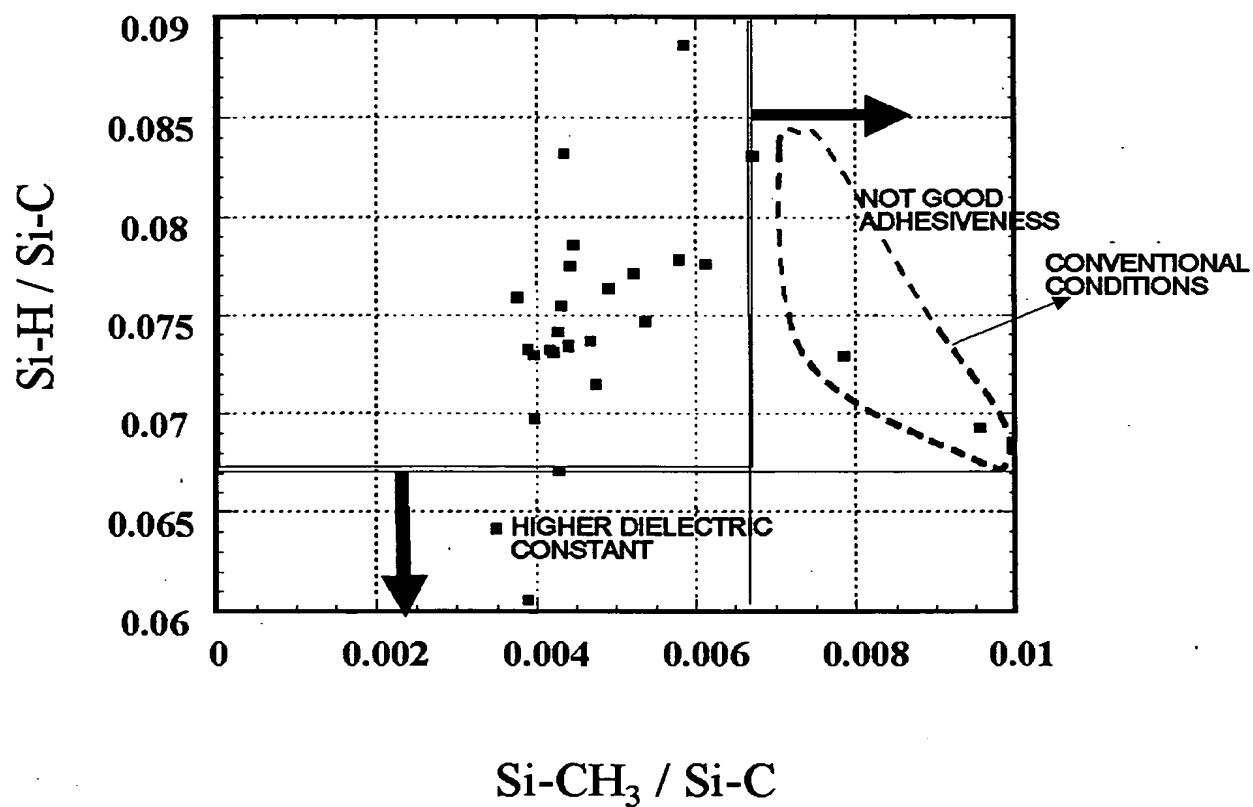


FIG. 18



**FIG. 19**

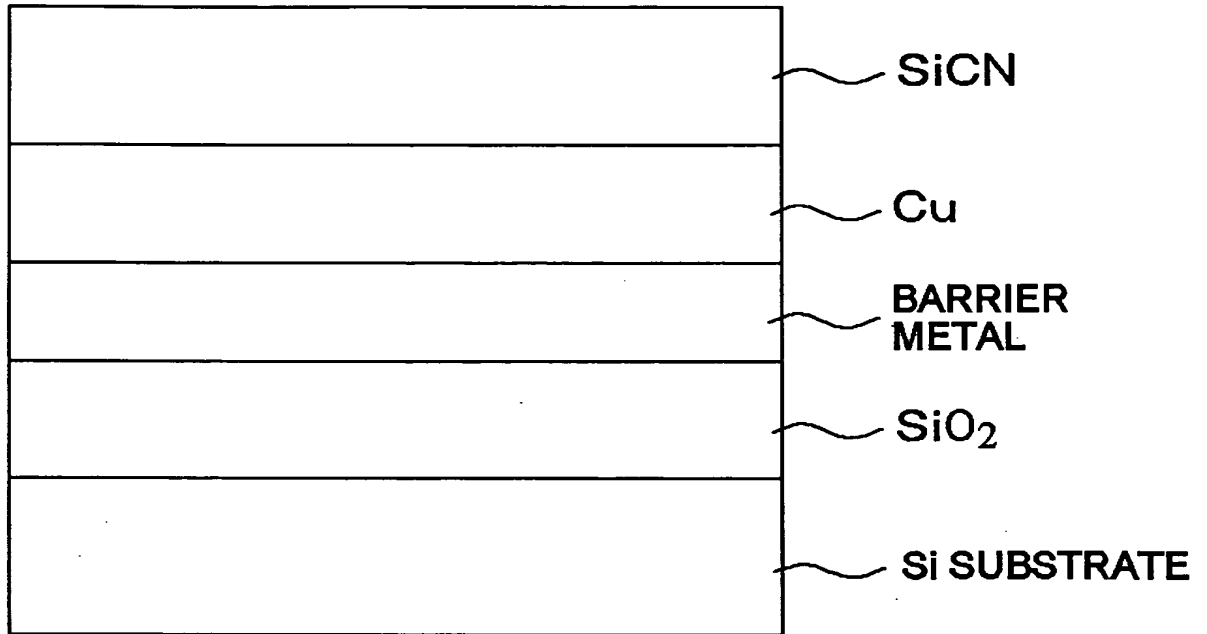


FIG. 20A

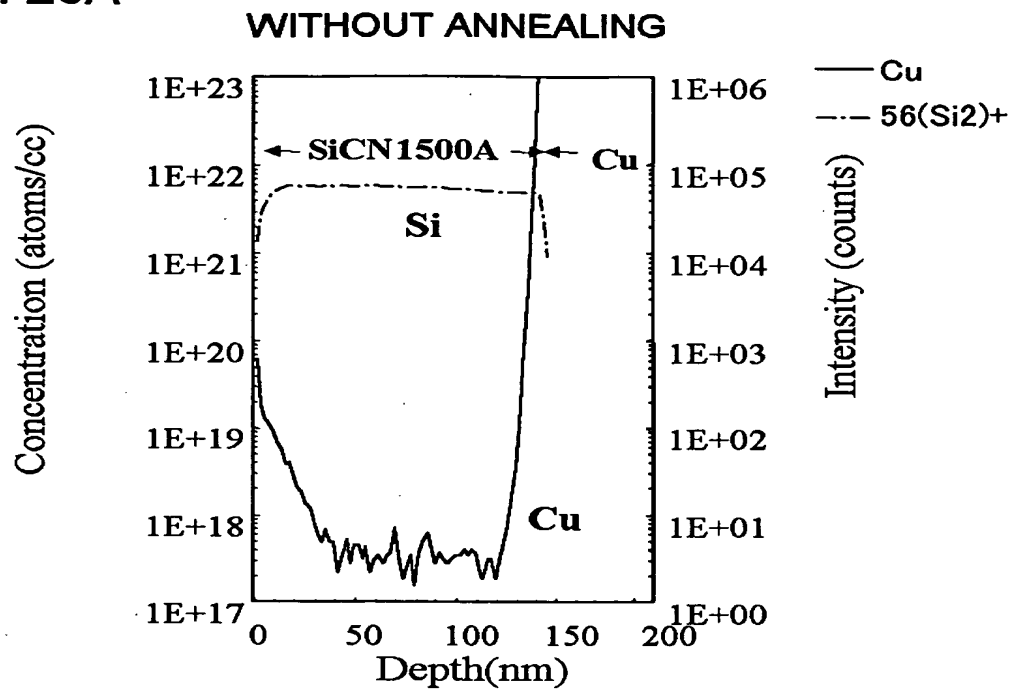
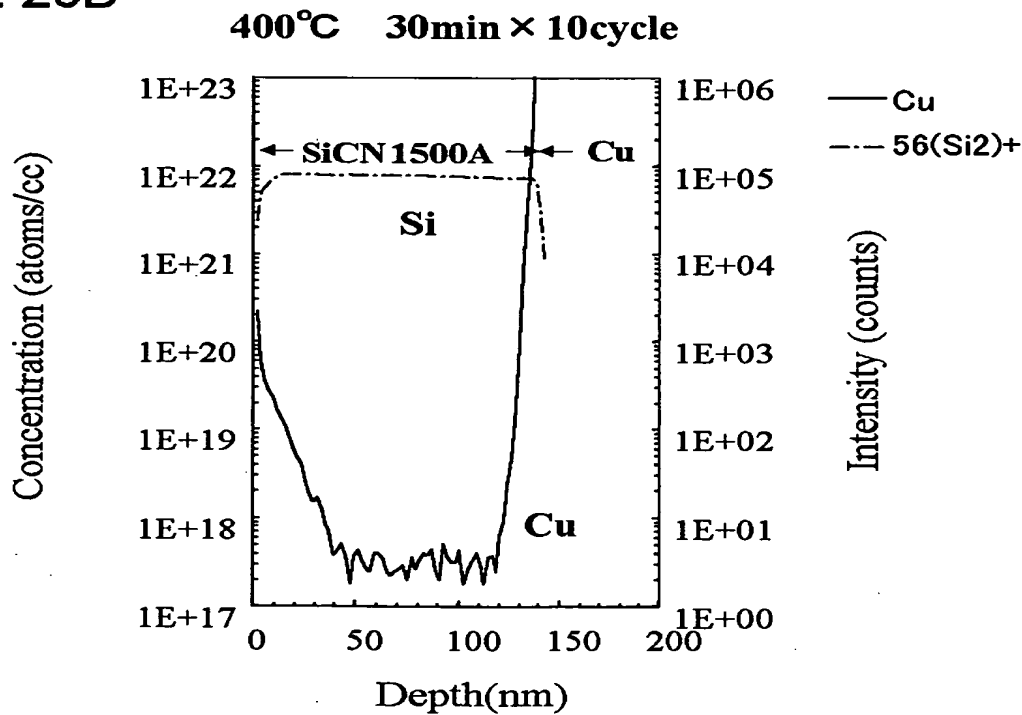
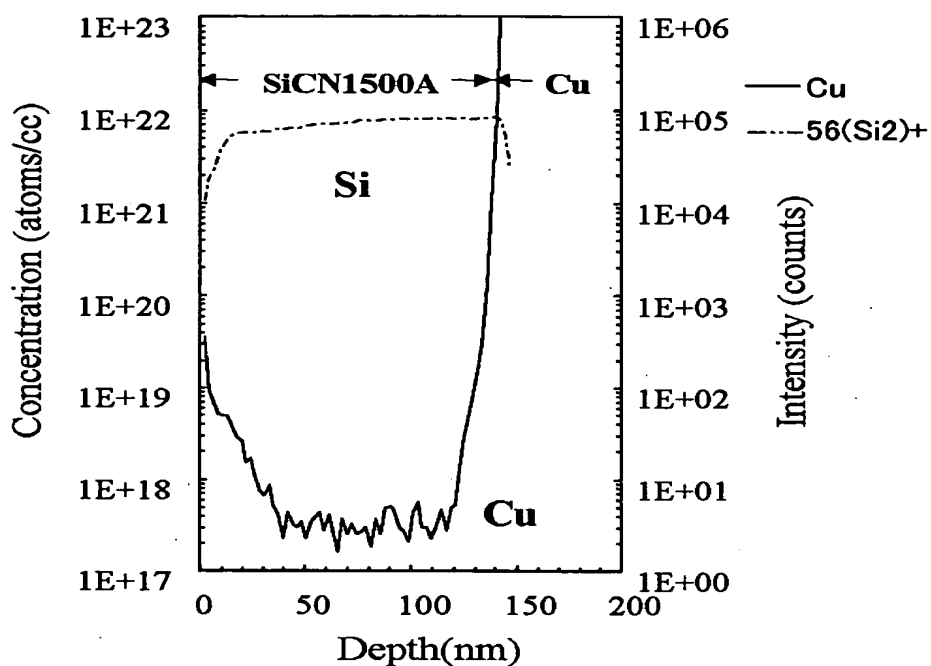


FIG. 20B



**FIG. 21A** **WITHOUT ANNEALING**



**FIG. 21B** **400°C 30min × 10cycle**

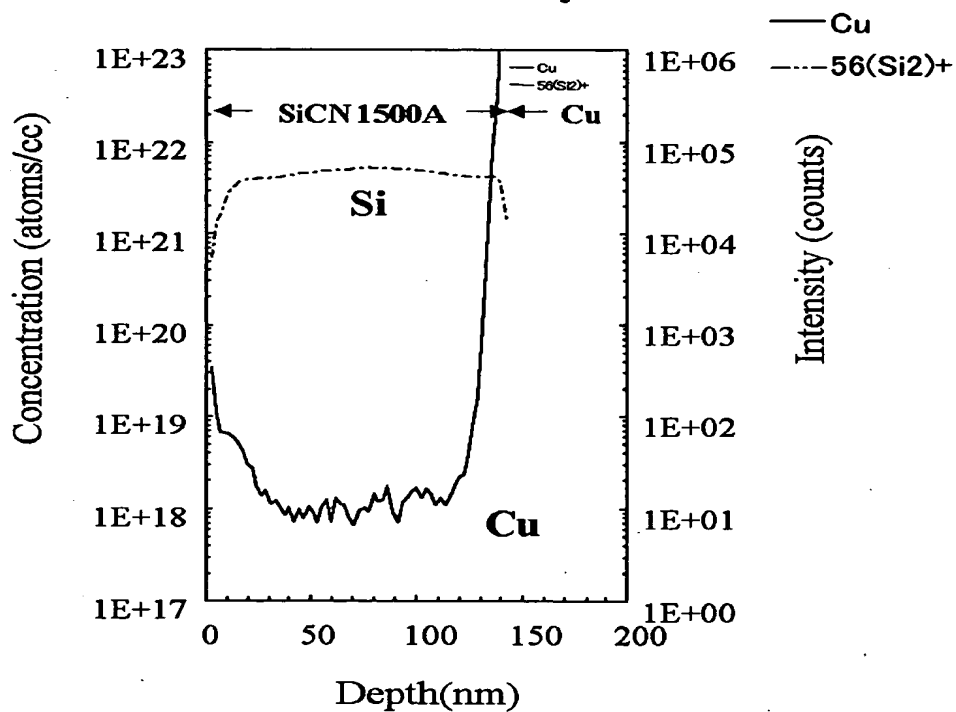


FIG. 22

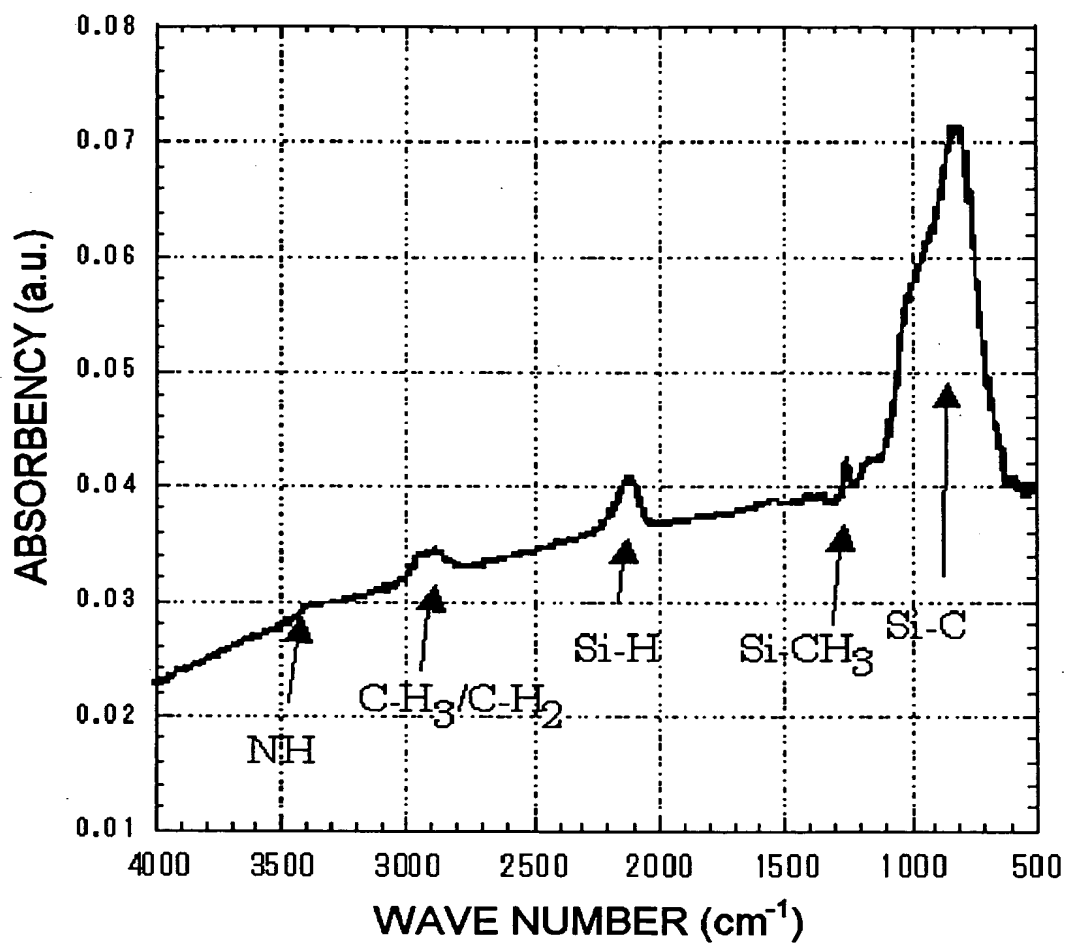


FIG. 23

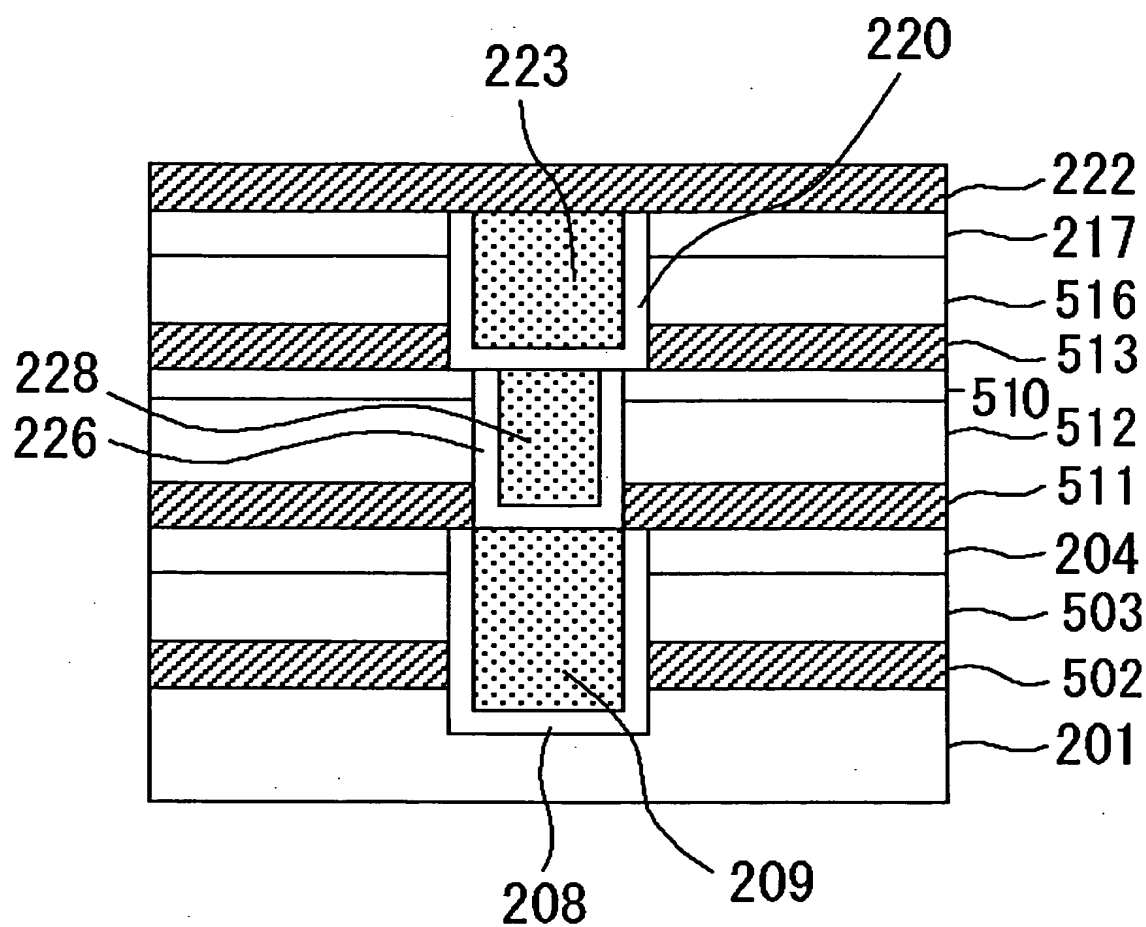


FIG. 24

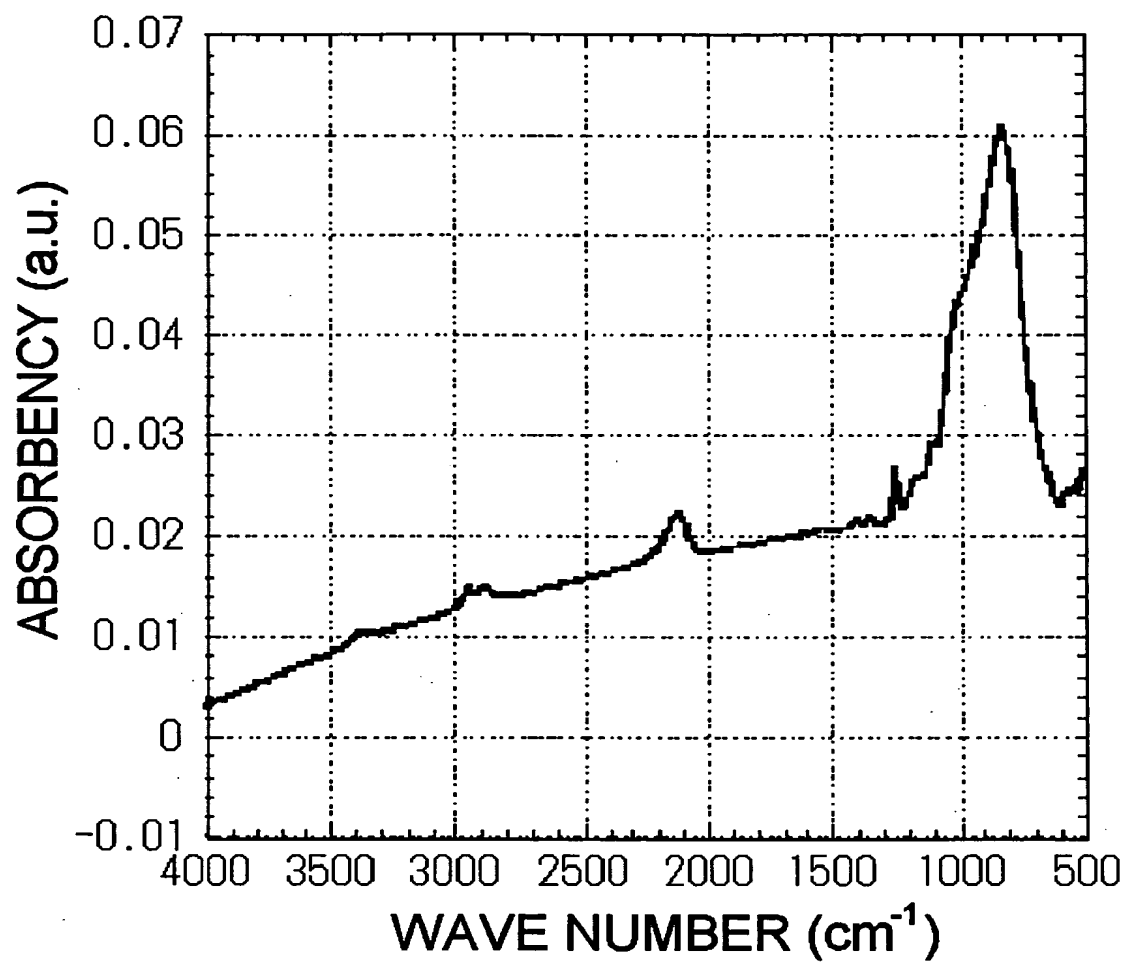




FIG. 25

